On the Way but not Quite There yet:

Sense of Adulthood and Identity Formation in 21-40 Year Olds

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Abstract

Comtemporary theorists stress the importance of viewing sense of adulthood as a subjective state rather than as a fixed entity achieved at a certain age. Such a subjective sense of adulthood is hypothesized to relate to developmental processes such as identity formation. The present longitudinal study (three waves spanning one year) investigated this hypothesis in a sample of 318 21-40 year olds. Cross-lagged analyses demonstrated that sense of adulthood consistently predicted increases in the making of and identification with identity commitments and decreases in maladaptive forms of identity exploration. Implications and suggestions for future research are discussed.

Key words: Identity; Sense of adulthood; Cross-lagged analysis.

Social-structural changes in many Western nations (e.g., rising ages of entering marriage and parenthood and the lengthening of higher education) have resulted in the postponement of reaching subjective adulthood, often until the late twenties (Arnett, 2000). Arnett (2004) proposed several distinctive features of this age period (which he termed emerging adulthood), such as instability and increased opportunities for identity exploration in areas such as work and values. One of the core features of emerging adulthood is the ambivalence individuals have about their status as an adult (Nelson & Barry, 2005). When asked whether they have reached adulthood, most individuals in their twenties respond "in some respects yes, in some respects no" (Arnett, 1997). It is not until the late twenties or early thirties that most individuals consider themselves full-fledged adults (Arnett, 2000; Fadjukoff, Kokko, & Pulkkinen, 2007). The reason that so many individuals feel in-between is mainly due to the criteria they consider important in becoming an adult. Not so much sociological criteria such as entering full-time work and marriage mark the transition to adulthood; rather individualistic criteria such as being autonomous and making independent decisions (core elements of identity formation) are considered important gradual markers for entering adulthood (Arnett, 1998; Nelson & Barry, 2005). Consequently, researchers investigated the link between identity formation and sense of adulthood under the assumption that making progress in the identity formation process would be related to sense of adulthood (e.g., Luyckx, Schwartz, Goossens, & Pollock, 2008; Nelson & Barry, 2005). However, no longitudinal study formally investigated this hypothesis.

The present longitudinal study was guided by two main objectives. First, given that sense of adulthood appears to promote responsible behavior and protect against depression and drug and alcohol use (Nelson & Barry, 2005) and, hence, can impact long-term development (Reitzle, 2006), it is crucial to examine how sense of adulthood unfolds over time and whether it develops similarly for all individuals. Using latent class growth analysis (LCGA; Nagin, 2005), we empirically distinguished different trajectory classes based on the initial level of and changes in sense of adulthood, and, hence, tried to identify distinct pathways to achieving a sense of adulthood. As such, sense of adulthood was conceived of as a subjective developmental process instead of as a fixed entity, with different trajectories for different individuals (Arnett,

2004; Osgood, Ruth, Eccles, Jacobs, & Barber, 2005). For instance, whereas some individuals might have a high stable sense of adulthood across time, others might start off low but increase their sense of adulthood across time.

Identity development was compared among these different trajectory classes to assess whether they differed on identity formation. For this purpose, we made use of a recently developed identity formation model assessing adaptive and maladaptive dimensions of identity formation and evaluation (Luyckx, Schwartz, Berzonsky, et al., 2008). This model captures the extent to which individuals arrive at identity commitments (commitment making) through a process of exploring various alternatives (exploration in breadth). Further, the model also assesses the degree to which commitments are evaluated through thinking and talking with others about them (exploration in depth), possibly resulting in a sense of certainty and satisfaction with these commitments (identification with commitment) (Luyckx, Goossens, & Soenens, 2006). However, especially during emerging adulthood in which the seemingly endless possibilities could be intimidating and disequilibrating (Schwartz, Côté, & Arnett, 2005), both processes of forming and evaluating commitments can be disturbed when individuals get "stuck" in continuously questioning their choices (ruminative exploration).

Second, using cross-lagged analysis, we aimed to investigate how sense of adulthood and identity formation actually influence each other across time. Making firm identity commitments, identifying with them, and refraining from using ruminative exploratory strategies were expected to predict increases in sense of adulthood (Arnett, 1998). Further, it may also be the case that achieving a high sense of adulthood in turn results in establishing a mature identity (Fadjukoff et al., 2007; Nelson & Barry, 2005). As such, we hypothesized a reciprocal relationship between sense of adulthood and identity formation.

Method

Participants

A total of 318 individuals (74% women; 97% Caucasian) participated in an online survey at baseline (T1), 6-months (T2), and 12-months follow-up (T3). Mean age was 29.10 year (*SD* = 4.86; range 21-40). A total of 94% were employed: 82% was working full-time and 56% had a permanent contract. Mean

organizational tenure was 3.87 years (*SD* = 3.61; range 0-17). Almost 62% were married, living together with their partner, or had a partner, and 29% reported having children. A total of 94% received higher education in the past. At T2, 245 (77%) and, at T3, 228 (72%) participated again. With respect to mean age, marital status, and mean organizational tenure, no differences emerged between drop-outs and those who continued to participate. On gender, educational level, and employment status, limited differences were found. Drop-outs were more likely to be men ($\chi^2(1) = 6.01$, $p < .05$, Cramér's $V = .13$), of lower education ($F(1, 316) = 6.47$, $p < .05$, $\eta^2 = .02$), and unemployed ($\chi^2(1) = 6.45$, $p < .05$, Cramér's $V = .14$). Participants with and without complete data were compared on identity and sense of adulthood using Little's (1988) Missing Completely At Random test. A nonsignificant chi-square value, $\chi^2(30) = 4.67$, *ns*, suggested that missing values could be reliably estimated using the expectation maximization algorithm (Schafer & Graham, 2002).

Measures

Questionnaires were scored on a 5-point Likert-type scale (range 1-5).

Sense of adulthood. Sense of adulthood was assessed using three items from the Identity Stage Resolution Index (ISRI; Côté, 1997): "I consider myself to be an adult", "I feel I have matured fully", and "I feel respected by others as an adult". Cronbach's alphas at T1-3 were .81, .75, and .81, respectively. As a validation check, participants completed a single item tapping into self-classification as an adult: "Do you think that you have reached adulthood?" (Arnett, 1997). Participants' response options included *No* (3% of the sample)*, In some respects yes, in some respects no* (55%), or *Yes* (42%). As expected, sense of adulthood was strongly related to adult self-classification at T1 (Spearman's $\rho = .70$; $p < .001$).

Identity formation. The Dimensions of Identity Development Scale (DIDS; Luyckx, Schwartz, Berzonsky, et al., 2008), including five items per dimension, was used. Sample items read: "I have decided on the direction I want to follow in my life" (Commitment making), "I sense that the direction I want to take in my life will really suit me" (Identification with commitment), "I regularly think over a number of different plans for the future" (Exploration in breadth), "I regularly talk with other people about the plans for the future I have made for myself" (Exploration in depth), and "It is hard for me to stop thinking about the direction I want to

follow in my life" (Ruminative exploration). Cronbach's alphas ranged between .81 and .90. Confirmatory factor analysis (CFA) indicated that the five-dimensional model fitted the data adequately (T1: SBS-$\chi^2(265) = 825.56$, RMSEA = .08, CFI = .93; T2: SBS-$\chi^2(265) = 687.32$, RMSEA = .08, CFI = .94; T3: SBS-$\chi^2(265) = 734.20$, RMSEA = .08, CFI = .93).

Results

Preliminary Analyses

Multivariate analyses of variance indicated that there were no gender differences on identity and sense of adulthood (T1: $F(6, 311) = 2.04$, *ns*, $\eta^2 = 0.04$; T2: $F(6, 311) = 1.72$, *ns*, $\eta^2 = 0.03$; T3: $F(6, 311) = 0.61$, *ns*, $\eta^2 = 0.01$). As displayed in Table 1, repeated measures analyses of variance indicated that commitment making, identification with commitment, and sense of adulthood increased, whereas exploration in breadth and ruminative exploration decreased across time. These mean-level changes were moderated by gender for commitment making ($F(2, 315) = 5.37$, $p < .01$, $\eta^2 = 0.03$) and exploration in breadth ($F(2, 315) = 4.96$, $p < .01$, $\eta^2 = 0.03$), with men showing stronger increases in commitment making and women stronger decreases in exploration in breadth. Further, sense of adulthood was positively related to commitment making (*r*s between .50 and .60) and identification with commitment (*r*s between .41 and .49), and negatively to ruminative exploration (*r*s between -.36 and -.44) at T1-3 (*p*s < .001).

Trajectory Classes

LCGA was used to identify trajectory classes of sense of adulthood. Three criteria were used to decide on the number of classes. The Bayesian Information Criterion (BIC) statistic for a solution with *k* classes should be lower than for a solution with *k-1* classes. Classification accuracy was assessed by entropy (*E*), ranging from 0.00 to 1.00, with higher values indicating more accurate classification. The Lo-Mendell-Rubin Test (which provides a *p*-value) was used to determine if there is a significant improvement in fit through the inclusion of an additional class. LCGA favoured a 4-class (BIC = 1509.65; *E* = .85) over a 2-class (BIC = 1746.99; *E* = .79) and 3-class solution (BIC = 1608.29; *E* = .82), with the LRT accompanying the 4-class solution being significant ($p < .01$). For the 5-class solution (BIC = 1508.78; *E* = .87), the LRT was non-significant ($p = .55$). Table 2 presents intercepts and slopes for the 4-class solution. Class 1 (*N* =

20) was labeled low stable; Class 2 (N = 87) low increase; Class 3 (N = 147) high increase; and Class 4 (N = 64) high stable. Classes did not differ in gender distribution, mean educational level, employment status, and type of contract. Significant differences were found for age ($F(3, 314) = 7.52$, $p < .001$, $\eta^2 = 0.07$), organizational tenure ($F(3, 308) = 4.92$, $p < .01$, $\eta^2 = 0.05$), marital status ($\chi^2(15) = 38.05$, $p < .001$, Cramér's $V = .20$), and having children ($\chi^2(3) = 26.45$, $p < .001$, Cramér's $V = .28$). Individuals belonging to the high stable class were older, longer employed, more likely to be married with kids, and less likely to be living with their parents. Individuals belonging to the low increase class were more likely to be single and, similar to the low stable class, employed for a shorter time and less likely to have kids.

Multigroup latent growth curve modelling was conducted to investigate whether individuals belonging to these four classes differed in identity development. First, for all five identity dimensions, a fully unconstrained baseline model (with all intercepts and slopes freely estimated among the classes) was estimated. Second, intercepts were held equal among all four classes, followed by a model in which slopes were held equal among all four classes. Third, if these constrained models provided a worse fit to the data than the baseline model, multigroup models were estimated in which intercepts and slopes were partially held equal among the classes. Table 3 displays the final parameter estimates.

For commitment making, the model with the slope held equal in the high increase and high stable classes ($\chi^2(7) = 10.48$, *ns*; RMSEA = .08; CFI = .98) provided a better fit to the data than the less parsimonious baseline model ($\chi^2(6) = 10.46$, *ns*; RMSEA = .10; CFI = .97). For identification with commitment, the model with the slope held equal in the low increase and high stable classes on the one hand and the low stable and high increase classes on the other hand ($\chi^2(8) = 12.83$, *ns*; RMSEA = .09; CFI = .97) provided a better fit to the data than the baseline model ($\chi^2(6) = 11.99$, *ns*; RMSEA = .11; CFI = .97). For exploration in breadth, the model with all intercepts held equal and the slope held equal in the low stable, the low increase, and the high increase classes ($\chi^2(14) = 4.70$, *ns*; RMSEA = .00; CFI = 1.00) fitted the data equally well as the baseline model ($\chi^2(7) = 4.26$, *ns*; RMSEA = .00; CFI = 1.00). For exploration in depth, the model with all intercepts and slopes held equal ($\chi^2(16) = 20.39$, *ns*; RMSEA = .06; CFI = .98) provided a better fit to the data than the baseline model ($\chi^2(10) = 15.49$, *ns*; RMSEA = .08; CFI = .97).

Finally, for ruminative exploration, the model with the slope held equal in the low stable, the low increase, and the high stable classes ($\chi^2(8) = 7.22$, *ns*; RMSEA = .00; CFI = 1.00) fitted the data better than the baseline model ($\chi^2(6) = 7.20$, *ns*; RMSEA = .05; CFI = .99).

Cross-Lagged Analyses

In all cross-lagged models, all within-time associations and stability coefficients between adjacent measurement times were controlled for. First, a baseline model (Model 1) including within-time associations and stability coefficients was estimated (SBS-$\chi^2(96) = 326.89$, RMSEA = .09, CFI = .95). Stability coefficients (*p*s < .001) ranged between .39 and .49 (T1-2) and between .42 and .50 (T2-3) for identity, and was .69 (T1-2) and .73 (T2-3) for sense of adulthood. Second, a reciprocal model (Model 2) including all cross-lagged paths from sense of adulthood to identity and vice versa was estimated (SBS-$\chi^2(76) = 237.21$, RMSEA = .08, CFI = .97). Trimming the non-significant paths resulted in Model 3 (SBS-$\chi^2(89) = 253.08$, RMSEA = .08, CFI = .97). Sense of adulthood consistently predicted increases in commitment making and identification with commitment and decreases in ruminative exploration. Additionally, exploration in depth at T2 negatively predicted sense of adulthood at T3. Figure 1 presents the cross-lagged coefficients. Next, a multigroup analysis compared a constrained model (with the cross-lagged paths set equal across gender) with an unconstrained model (with these coefficients allowed to vary). No significant difference emerged (ΔSBS-$\chi^2(7) = 9.27$, $p = .61$; ΔCFI < .01; and ΔNNFI < .01), indicating that Model 3 fitted equally well for men and women.

Discussion

The present study expanded our knowledge on the transition to adulthood by relating sense of adulthood to identity formation in a longitudinal sample of 21 to 40 year olds. In line with previous research, a substantial proportion of participants did not self-classify as adults. The four trajectory classes obtained for sense of adulthood shed further light on this intriguing finding. These classes were differentiated on the basis of levels of and changes in sense of adulthood. For example, whereas some individuals did not feel fully matured and remained so across time, others functioned at higher levels of sense of adulthood, or increased their sense of adulthood across time. In line with Shanahan, Porfeli, Mortimer, and Erickson

(2005), class membership was related to three important transition markers of family life (i.e., moving from the parents' home, marriage or cohabitation, and having children) that are commonly related to self-perceived adulthood, providing external validity for these adulthood classes.

The low stable class scored the lowest on commitment making (which tended to decrease even further across time) and identification with commitment, and the highest on ruminative exploration. The high stable class, in contrast, was characterized by the highest levels of commitment making and identification with commitment (which further increased across time) and the lowest ruminative exploration levels. This class also showed the steepest decrease across time in exploration in breadth: As individuals continued to identify themselves with their commitments, the need for a broad identity search diminished. The low and high increase classes scored in-between the low stable and high stable classes with respect to levels of commitment making, identification with commitment, and ruminative exploration. Both commitment making and identification with commitment increased across time in the low increase class. Given that previous research abundantly demonstrated that having strong identity commitments is beneficial for a host of outcomes (e.g., well-being and self-esteem) and protects against depression and health-compromising behavior (Kroger & Marcia, in press), sense of adulthood should be taken into account in studies assessing identity formation (and psychosocial functioning in general) in individuals on the road to adulthood (Arnett, 2004).

The cross-lagged findings consistently indicated that sense of adulthood positively predicted making and identifying with identity commitments and protected against maladaptive exploratory strategies. Contrary to expectations, the present study did not support the idea that identity formation is a consistent over-time predictor of achieving a sense of adulthood. Only one marginal effect emerged: Exploration in depth was negatively related to sense of adulthood, and only from T2 to T3. Apparently, continuous evaluations and revisions of identity commitments can diminish the feeling of being an adult. More importantly, however, although previous qualitative studies indicated that deciding on one's own beliefs and values is an important marker of reaching adulthood, making and identifying with strong identity commitments did not prompt a sense of adulthood. Apparently, it is not identity commitments as such that

yields a sense of adulthood. Future research might want to explore the conditions in which identity commitments contribute to a sense of adulthood. It might be that commitments only contribute to a sense of adulthood if these are perceived of as autonomous and self-determined (Deci & Ryan, 2000). Finally, similar to the idea that no single family or work-related transition strongly triggers individuals' self-perceptions of being an adult (Reitzle, 2006), future research should investigate multiple psychological variables influencing sense of adulthood (Shanahan et al., 2005). A specific patterning of psychosocial variables (e.g., having made strong identity commitments, feeling autonomous, and being self-reliant) might in tandem – instead of in isolation – influence sense of adulthood (Arnett, 2004).

Limitations and Suggestions

First, the sample was quite homogeneous in terms of educational level and ethnicity, limiting the generalizability of the obtained results. Future research should sample individuals from different educational and ethnic backgrounds to check whether similar processes would occur. Second, all data were self-reported. Although self-reports are most appropriate to gather information about internal processes such as sense of adulthood and identity development, the sole reliance on a single informant may artificially inflate correlations among constructs. Third, the present study tracked development in sense of adulthood and identity across a short time period. Future research should examine this transition starting in late adolescence and extending well into the thirties.

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Table 1

Descriptives and Mean-Level Changes

Variable	T1	T2	T3	*F*	η^2
Sense of adulthood	3.78 (0.75)	3.83 (0.67)	3.87 (0.69)	4.84**	.03
Commitment making	3.60 (0.78)	3.62 (0.70)	3.70 (0.66)	3.54*	.02
Identification with commitment	3.58 (0.66)	3.62 (0.58)	3.67 (0.59)	3.16*	.02
Exploration in breadth	3.60 (0.85)	3.52 (0.80)	3.43 (0.74)	6.86***	.04
Exploration in depth	3.40 (0.79)	3.34 (0.69)	3.37 (0.67)	1.10	.00
Ruminative exploration	2.72 (0.98)	2.63 (0.88)	2.60 (0.82)	3.04*	.02

Note. Standard Deviations (*SD*) within parentheses. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

Table 2

LCGA Parameter Estimates of Sense of Adulthood Classes (N) Across T1-3

	Growth parameters	
	Mean intercept	Mean slope
Low stable (20)	2.38***	0.02
Low increase (87)	3.22***	0.07*
High increase (147)	3.91***	0.05**
High stable (64)	4.69***	-0.01

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 3

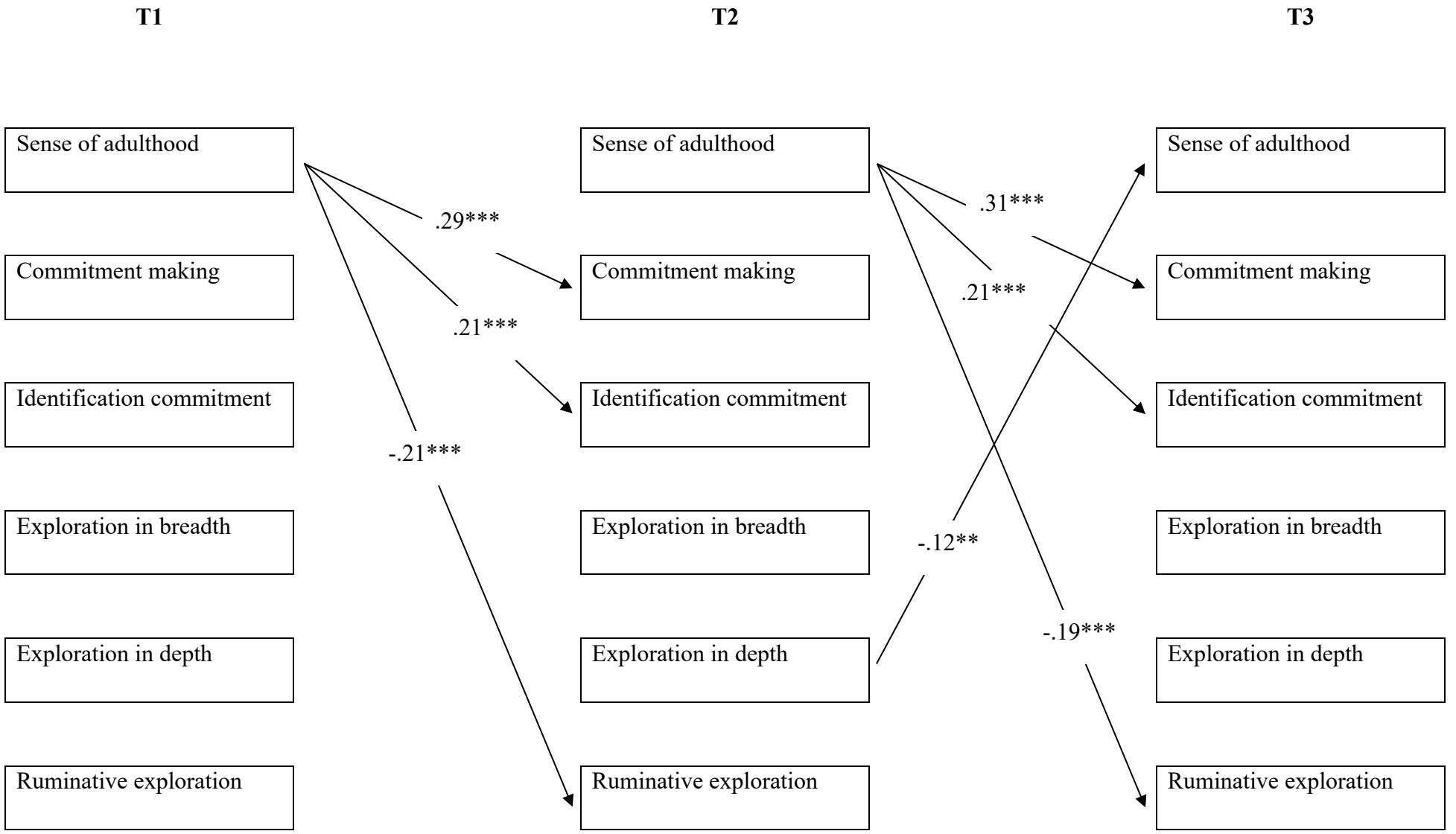
Multigroup Parameter Estimates of Identity Dimensions for the Four Sense of Adulthood Classes

	Growth parameters			
	Low stable	Low increase	High increase	High stable
Commitment making				
Mean intercept	2.74***	3.21***	3.76***	4.03***
Mean slope	-0.10	0.12**	0.03 [a]	0.03 [a]
Identification commitment				
Mean intercept	2.98***	3.27***	3.74***	3.86***
Mean slope	.01 [b]	0.07** [a]	0.01 [b]	0.07** [a]
Exploration in breadth				
Mean intercept	3.59*** [a]	3.59*** [a]	3.59*** [a]	3.59*** [a]
Mean slope	-0.06** [a]	-0.06** [a]	-0.06** [a]	-0.18***
Exploration in depth				
Mean intercept	3.38*** [a]	3.38*** [a]	3.38*** [a]	3.38*** [a]
Mean slope	-0.01 [a]	-0.01 [a]	-0.01 [a]	-0.01 [a]
Ruminative exploration				
Mean intercept	3.64***	3.12***	2.53***	2.31***
Mean slope	-0.10*** [a]	-0.10*** [a]	-0.02	-0.10*** [a]

Note. Parameter estimates with same superscripts within rows were held equal in the respective classes. Parameters without superscripts were estimated freely. ** $p < .01$. *** $p < .001$.

Figure 1.

Final cross-lagged model (Model 3). For clarity reasons, within-time correlations and stability coefficients are not presented. All path coefficients are standardized. ** $p < .01$. *** $p < .001$.


T1
T2
T3
Sense of adulthood
Commitment making
Identification commitment
Exploration in breadth
Exploration in depth
Ruminative exploration
Sense of adulthood
Commitment making
Identification commitment
Exploration in breadth
Exploration in depth
Ruminative exploration
Sense of adulthood
Commitment making
Identification commitment
Exploration in breadth
Exploration in depth
Ruminative exploration
.29***
.21***
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.31***
.21***
-.12**
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